

Little Orphan Radio

GMRS: A personal communications radio system

While Dick Tracy amazed 1940 era Sunday comic strip readers with his crime fighting wrist radio, the Federal Communications Commission actively tried developing 10 mHz of the UHF spectrum as the Citizens Radio Service (CRS) or Class A radio.

Five decades later, Dick Tracy moved to wrist television and CRS became the General Mobile Radio Service (GMRS), UHF's "Little Orphan Radio". Band hungry predators constantly threaten GMRS's space and if it hadn't been for Daddy Warbucks (aka Personal Radio Steering Group) Class A service might have vanished without as much as a trace. Class A once held sway over 460.0 to 470.0 MHz, but today it occupies only 4 percent of that space.

Under the FCC's Part 95 rules it's an alternative to the overcrowded CB channels and allows almost anyone who obtains a license to utilize the band for personal communications. The objective is establishing a functional instead of a recreational communication network, sharing a limited amount of space in a rational manner.

Few people paid attention to Class A until CB radio underwent a severe crisis in 1976. Hobbyists had been slowly building CB into a reasonable alternative to ham radio when the 1972 Arab oil embargo hit the United States. Suddenly, drivers made CB radio a resistance symbol.

Eighteen wheel cowboys challenged the interstate speed limits and the "smokies" who enforced the laws. All one needed to join their ranks was a



By Everett Slosman

as GMRS.

GMRS attracted individuals wanting a sensible personal communications band. It also attracted the "CB good guys"; organizations like REACT that assist public safety agencies, monitor traffic emergencies, and help motorists.

Both claimed GMRS as their rightful place in the spectrum, so clashes were inevitable. The common ground which allows them to cooperate and share the band is distaste for the undisciplined antics of "jaw-

couple of bucks and a nearby radio store. Eventually, even drug stores sold 29 MHz transceivers alongside the candy bars and toothpaste.

By 1976, CB had deteriorated into a rowdy bunch of outlaws making foul-mouthed transmissions, violating the rules of licensing and identification with impunity, and driving the average citizen off the band.

However, the failure of CB did not lessen the need for a system of personal radio communications. By creating the Personal Use Radio Advisory Committee (PURAC), the FCC attempted to restore sanity to the bands. As a committee of respected operators, PURAC backed the commission despite derogatory remarks and name calling.

PURAC also created a subcommittee to study Class A radio. This group made over a hundred recommendations in their 1978 report and Class A became a personal band known

boners" and "linear amplifier freaks." Personal radio activists formed local citizen groups to lobby the FCC and comment on rule-making inquiries and proposals. They published newsletters keeping the network of informal coalitions in touch. Eventually, the Personal Radio Steering Group (PRSG) took on the role of Daddy Warbucks and "Little Orphan Radio" had protection.

Under the new rules, only individuals can apply for a license or significantly modify an existing one. Only corporations, partnerships, and government agencies licensed prior to January 1, 1989 are grandfathered in and these have been strongly encouraged to apply for private land mobile licenses.

Any American, 18 or older, not registered as a foreign gov-

ernment representative, can apply for a license. Applications and assistance are available from regional FCC offices or PRSG.

All licensees must share the band by operating only on those frequencies specifically assigned in their license. Individuals can also use channel 675 for nationwide travelers assistance and emergency calls. Base and mobile stations are limited to 50 watts.

Split frequencies between the assigned channels are available for individuals operating simplex low power base or mobile units using not more than 5 watts effective radiated power.

The FCC prohibits hobby-style communications and "CQing." All transmissions must be in-the-clear, base-to-mobile, or mobile-to-mobile FM. Rules forbid auto phone patches.

Transmissions rarely travel more than 25-30 miles and mobile signals about two miles. Repeater stations insure adequate local coverage. Most are operated by public service organizations that monitor their assigned frequency and provide retransmission services for those authorized to use them.

A number of repeaters use the familiar CTCSS (Continuous-Tone-Controlled-Subaudible-Squelch) to activate their equipment. But, repeaters also use other access systems such as "Private Line" or "QC". Tones run between 67 and 220 Hz, so it is doubtful they can be heard on the average scanner. Though users need an agreement with a repeater operator, travelers, in the interest of public safety and convenience, can usually access one on channel 675 when they

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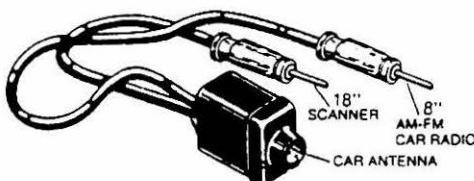
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need help.

A bare-bones setup with the two assigned frequencies installed runs about \$150-300. Simple base stations with tone capability cost between \$500 and \$2000. Then, there's the cost of an antenna--between \$75 and \$100.

Corwin D. Moore, Jr. is PRSG's Administrative Coordinator and discussing GMRS with him is talking with a true believer. GMRS licensees are extremely vocal in their praise of the system and even PRSG'S fact sheet reveals a missionary's zeal. "GMRS has evolved in the direction of becoming the dispatch system for organizing the activities of one's life, to coordinate in mutual enterprise with the members of one's family, with other licensees, etc."

The organization claims an historic position as the band's national advocate; the promoter of "specific, limited, non-superfluous and non-frivolous" functional UHF mobile radio. Operators shun conversational communications more appropriate to CB, ham bands or telephone. Otherwise, important communications such as traveler's aid or reporting local emergencies, would be delayed. So, catching transmissions on a scanner requires patience.

Licensees tend to be more family and friends oriented than other radio buffs, according to Moore, who describes them as people sharing a number of non-broadcast activities and hobbies.

Start monitoring GMRS by scanning local repeater frequencies. Duplex transmissions start on the low end of a paired frequency, so "ride" the 462 MHz side of the spectrum.

PRSG helps with everything from equipment prices to proper on-air station identifications. They print a bibliography, fact sheets, and a National Repeater Guide. They also run a computer

GMRS REPEATER STATIONS

This repeater station list came from information furnished by the Personal Radio Steering Group.

State	Location	Channel	
Alabama	Birmingham-725		675, 700 Miami/Ft. Lauderdale-550, 575, 600, 625, 700, 725
	Eufala- 550		Naples-650
	Huntsville-550,575, 600, 675, 725		Orlando/ Disney World-550, 575, 660, 625 650, 675, 700
	Mobile -625		Pensacola-675
Alaska	Anchorage-650, 675		Tallahassee- 575, 650, 675
Arizona	Flagstaff-675		Georgia
	Kingman-700		Albany-550
	Phoenix -550, 625, 650,675		Atlanta-550, 575, 600, 625, 650, 675, 700
	Prescott-550		Macon -675
	Tucson-675		Ringold-550
	Yuma-675		Valdosta-575, 700
Arkansas	Fayetteville-675		Hawaii
	Little Rock-675		Maui Island- 650
	West Memphis-675		Oahu Island-625, 650, 725
California	Bakersfield-550, 575, 675		Idaho
	Barstow-675		Boise-700
	Bishop-575		Coeur d'Alene-700
	El Centro-675		Lewiston-650, 675
	Eureka-575, 625, 650		Twin Falls-600
	Fresno-600, 625, 675		Illinois
	Los Angeles-550, 575, 600, 625, 650, 675, 700, 725,		Carbondale-550
	Palm Springs-875		Chicago-550, 575, 600, 625, 650, 675, 700, 725
	Sacramento-550, 600, 675, 700		E. St. Louis-600, 675, 700, 725
	Salinas-550, 575		Effingham-675
	San Diego-550, 575, 675, 725		Moline-600, 675
	San Francisco-550, 575, 600, 650, 675, 700		Peoria-550, 575
	San Luis Obispo-575		Peru-550, 675
	Susanville-675		Rockford-625, 650, 700
Colorado	Ukiah -675		Springfield-600, 675
	Aspen-550		Indiana
	Craig-550		Anderson-550, 675
	Denver-550, 575, 600, 625, 650		Evansville-550, 675
	Durango-660		Fort Wayne-675, 725
	Vail-550, 625, 650, 700		Gary-550, 575, 600, 650, 675,
Conn.	Greenwich-550, 700		Indianapolis-650, 675
	Hartford-575, 600, 625, 650		Kokomo-550
	New Haven-600, 675		Lafayette-550
Deleware	Dover-600		Marion-675
	Rehoboth Beach-575, 600, 675		New Albany-600, 675, 725
	Wilmington-675, 700		South Bend-550, 675
DC	Washington-550, 575, 600, 625, 650, 675, 700		Vincennes-600, 675
Florida	Clearwater/Tampa/St. Pete-550, 575, 600, 625, 675, 700		Warsaw-550
	Daytona Beach-600, 675		Amarillo-725
			Burlington-675
			Council Bluffs-675, 700
			Davenport-625
			Des Moines-600, 625, 650, 675,700

continued

bulletin board. The BBS allows open registration for visitors. Each receives an hour of connect time daily and can read all 14 bulletins explaining GMRS. Subscribers receive additional time plus membership conferences and messaging. Their computer automatically recognizes a caller's modem configurations. However, it's a good idea to set your unit at 2400 baud, 8-N-1 before dialing 313-995-2100. Leave a message for the Sysops (system operator) before hanging up. Tell him you read about GMRS in National Scanning Report.

For more information, write or call Personal Radio Steering Group, P.O. Box 2851, Ann Arbor, MI 48106. 313-662-4533 (voice). If enough people become

GMRS licensees, "Little Orphan Radio" could become the "Belle of the Airwaves."

GMRS FREQUENCIES

Duplex Channels and Designators

Lower Frequency	Upper Frequency	Designator
462.550	467.550	550
462.575	467.575	575
462.600	467.600	600
462.625	467.625	625
462.650	467.650	650
462.675	467.675	675
462.700	467.700	700
462.725	467.725	725

Simplex or Split Frequencies

Frequency	Designator
462.5625	5625
462.5875	5875
462.6125	6125
462.6375	6375
462.6625	6625
462.6875	6875
462.7125	7125